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Descriptions of three new Calliphoridae from the Ethiopian region (Diptera Cyclorrhapha)

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1. *Hemigymnochaeta lindneri* n. sp. (Calliphorinae)

In my key to the genus *Hemigymnochaeta* Corti (ZUMPT 1956) this species runs down to *H. bequaerti* Curran and *H. unicolor* (Bigot), but the structure of the hypopygium is quite different from all other known species of *Hemigymnochaeta* (fig. 1) and the new species is easily recognizable as long as the male terminalia are dissected, a procedure which must be observed on almost all calliphorids.

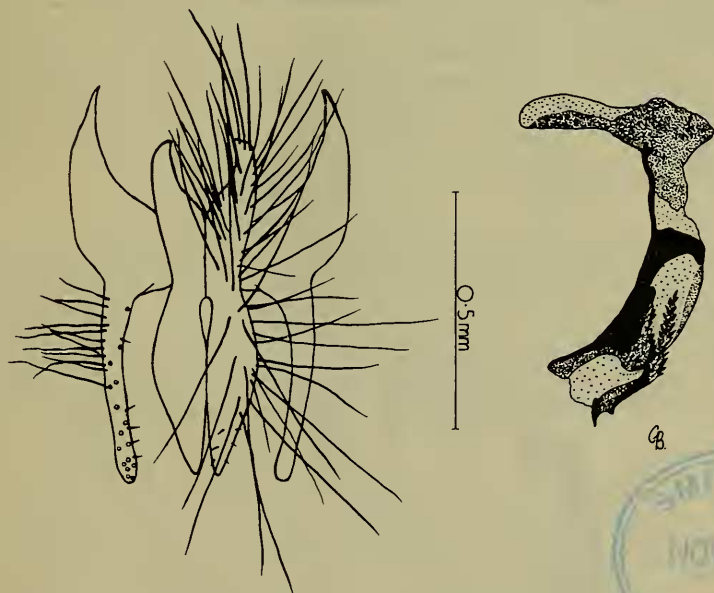


Fig. 1. *Hemigymnochaeta lindneri* n. sp.
Cerci and paracymbia in dorsal view, phallosome laterally.

Male — Eyes touching, upper and inner facets moderately enlarged, but not demarcated from the lower ones. Frontal stripe red-brown, triangular, only developed in the lower part of frons. Ocellar triangle black; iv, oc and 5 pairs of paf present. Face yellow, parafacialia with a few, quite indistinct short setae in the upper part, third antennal segment amply twice as long as the second, arista black, with long hairs

on both sides. Bucca about $\frac{1}{3}$ rd as high as the eye is long, hairs and peristomal bristles black, vibrissa long, facial ridge above it with a number of black setae. Palpi and proboscis yellow like the face, only the vertex is glossy black.

Thorax completely yellow-orange, without a mesonotal pattern. Chaetotaxy: $ac = 3 + 2$ (median postsutural pair is wanting), $dc = 2 + 4$, $ia = 1 + 3$, prs and outer ph present, $h = 3$, $n = 2$, $sa = 3$, but between the anterior two, a further bristle is situated further inwards (normal?), $pa = 2$. Scutellum with long and thick as well as shorter and thinner marginal bristles, altogether 7 on each side, furthermore one pair of discal bristles is present. Pleura with black bristles, and with black as well as pale hairs. Propleuron bare, one thick and one thin prs and pp each, $st = 1 : 1$, mesopleural and hypopleural bristles fully developed. Wings with a brown tinge, which is especially marked on the outer terminal part; r_{4+5} with a row of dorsal setae up to $r-m$, R_5 open. Alar and thoracic squamae yellow-brown, the latter narrow; halter yellow. Legs yellow; fore-tibia with 2 ad and a submedian pv; mid-tibia with a submedian ad, 2 pd and one submedian ventral bristle; hind-tibia with 2 ad, one weak submedian pd and a submedian av.

Abdomen orange with a black pattern, which covers the last tergite, the posterior half and the middle dorsal part of tergite IV. On tergite III, the lateral parts of the hind margin are narrowly darkened, but show in the middle a short quadrangular protrusion of the pattern.

Length: 9 mm.

Locality: 1 ♂ from Marangu, Tanganyika, 1.-20. III. 1959 (Museum Stuttgart).

This species is named in honour of its collector, Professor Dr. E. LINDNER, the well-known founder and editor of the monumental work: "Die Fliegen der Paläarktischen Region."



Fig. 2. *Sarcophaga nodosoides* n. sp.
Hypopygium in lateral view. Outline of cerci dorsally.

2. *Sarcophaga nodosoides* n. sp. (Sarcophaginae)

This species, related to *S. nodosa* Engel, is well characterized by the structure of the hypopygium (fig. 2).

Male — Head silvery pollinose, frontal stripe black, distinctly widened towards the antennal groove, and there $2\frac{1}{2}$ times as broad as near the tip of the ocellar triangle.

Frons at its narrowest point measuring $\frac{4}{9}$ the length of the eye; and one parafrontalium is at this part $1\frac{1}{2}$ times as broad as the frontal stripe. The parafrontals reach the hind margin of the second antennal segment; iv and f long and thick, oc distinct, but relatively weak. Parafrontalia and -facialia densely beset with black hairs. Bucca half as high as the eye is long, silvery white pollinose, with black hairs of moderate length in the anterior part, and long and thick white hairs posteriorly. Antennae black, third segment about twice as long as the second. Palpi blackish too.

Thorax grey pollinose, with three longitudinal black stripes on the notum. Prescutellar pair of ac present, but relatively short and thin. Prescutellar pair of dc long and thick, the next anterior at most half as long and much thinner; the next 4—5 pairs still detectable, but short and thin. Presutural ac are wanting; of the dorsals, 3 pairs are visible, but they are short and thin. Prescutellar pair of ia long and thick, the presuturals are not developed; prs, 2 ph and 3 h present; n = 4, sa = 3, pa = 2, sc = 3 + 1, st = 1 : 1 : 1. Propleuron bare, one strong pp and pst which are accompanied by several bristly hairs. Wing hyaline, epaulet black, basicosta yellow, veins black or brown, r_1 dorsally bare, r_{4+5} with a few black setae near the base; $cs_{1-5} = 5 : 2 : 4 : 1.2 : 0.4$. Legs black; fore-tibia with 3 ad in the upper half and one submedian pv; mid-femur with a row of thick and relatively short bristles on the terminal half of the antero- and postero-ventral edges, mid-tibia with two long and thick ad, several shorter pd, a short submedian pv and a long submedian av, ventral hairs short; hind-femur ventrally with long hairs and bristles, hind-tibia with long and dense ventral hairs, a submedian pv bristle, two long pd, and several bristles on the antero-dorsal edge.

Abdomen with the usual chess-board pattern, tergite III without median marginal bristles, tergite IV with one pair of erect median marginals, last tergite with a row of marginal bristles. Fifth sternite deeply emarginate, with dense spines arranged like a brush. Genital segments reddish, the first with a row of strong bristles.

Length : 15 mm.

Female — Not known.

Locality : 1 ♂ from Kalk Bay, Cape Prov., South Africa, 23. X. 1958 (Museum Stuttgart).

3. *Sarcophaga montivaga* n. sp. (Sarcophaginae)

This species, like the foregoing one, belongs to my *haemorrhoidalis*-group (ZUMPT 1951) which contains *Sarcophaga* species with a bare propleuron, a dorsally bare vein r_1 and wings which are not conspicuously broad yellow at base. Within this group, it is characterized by 3 postsutural dorsocentral bristles, a short-haired mid-tibia, and by a tergite III without a distinct pair of median marginal bristles. Like the majority of the *Sarcophaga* species, *S. montivaga* is easily recognizable by the structure of the hypopygium (fig. 3).

Male — Head silvery pollinose, frontal stripe black, widened towards the antennal groove, and there about twice as broad as near the tip of the ocellar triangle. Frons at its narrowest point measuring about $\frac{2}{7}$ of eye-length; and one parafrontalium is at this point half as wide as the frontal stripe is broad. The parafrontals reach the middle of the second antennal segment; iv, f and oc well developed, and also ev is distinct, but only about half as long as iv. Parafrontalia and -facialia densely and fairly uniformly beset with black hairs. Bucca half as high as the eye is long, silvery-white pollinose, in the greater part with black hairs, pale ones only on the postbucca. Antennae black, third segment about twice as long as the second. Palpi black.

Thorax olive to white pollinose, with three longitudinal black stripes on the notum. Prescutellar pair of ac distinct, but weaker than the dc. There are three pairs of dc present, but they diminish in size towards the suture; two postsutural ia, prs present, outer ph wanting, h = 3, n = 4, sa = 3, pa = 2, sc = 3 + 0, st = 1 : 1 : 1. Propleuron bare, one strong pp and pst developed which are accompanied by several bristly hairs.

Wing hyaline, epaulet black, basicosta yellow, veins yellow-brown, r_1 dorsally bare, r_{4+5} with setae half-way to $r-m$; $cs_{1-5} = 7:2.5:6:2:0.5$. Legs black; fore-tibia with two longer and 2—3 shorter ad in the upper half, and with one submedian pv; mid-femur without ctenidium, but with strong bristles, mid-tibia with 2 long and strong ad, 3 long pd, and a submedian pv and av, ventral hairs short; hind-femur ventrally with long hairs and bristles, hind-tibia with long and dense hairs, a submedian pv, two long pd and several bristles of different length on the antero-dorsal edge.

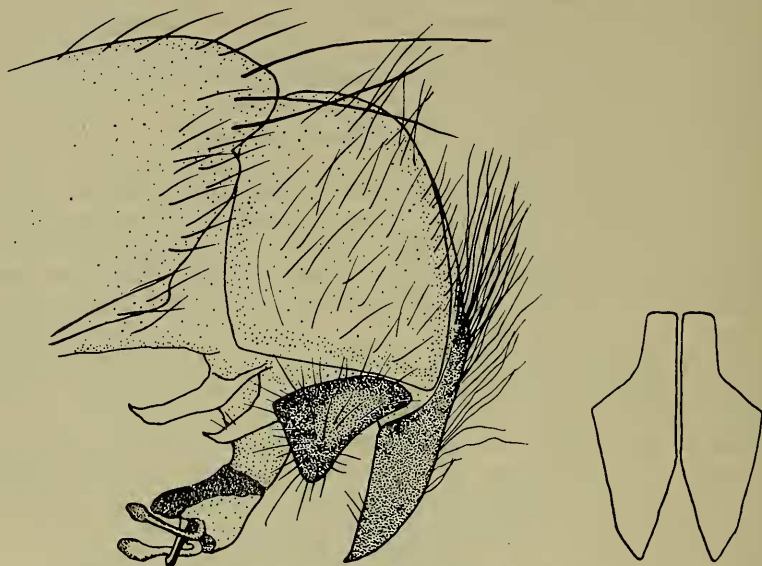


Fig. 3. *Sarcophaga montivaga* n. sp.
Hypopygium in lateral view. Outline of cerci dorsally.

Abdomen with the usual chess-board pattern, tergite III without a pair of median marginal bristles, in the holotype, one bristle only is slightly longer and thicker than the neighbouring ones. Genital segments reddish, the first with several strong marginal bristles.

Length: 8—10 mm.

Female — Not known.

Locality: 2 ♂♂ from Cape Town, Lion Head, South Africa, 2. XI. 1958 (Holotype in Museum Stuttgart, paratype in the collection of the South African Institute for Medical Research).

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